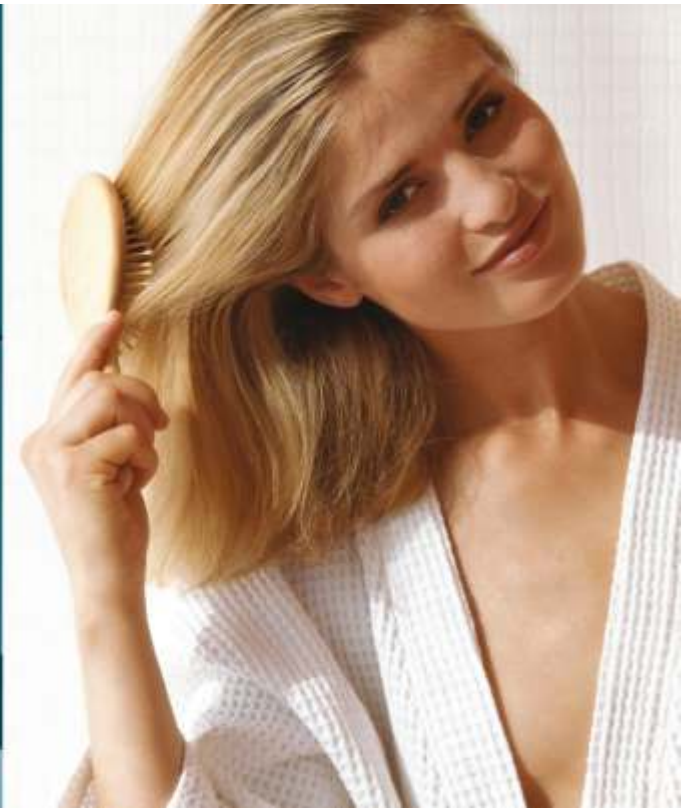
Maxwell

Gas Boiler for Home Heating & Hot Water



Comfort... Redefined

New Products

Volcan Series

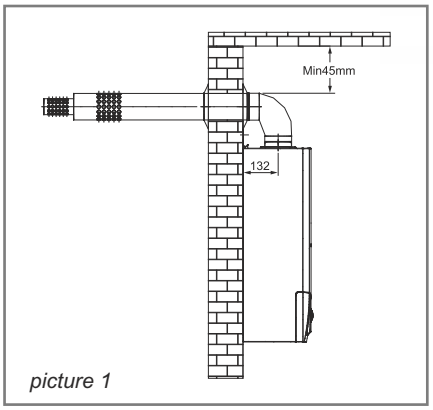
Introduction

Introducing the Maxwell Volcan series, elegant and state of the art.
The Volcan is an advanced eco-friendly wall hung gas boiler sealed heating system that not only allows you to heat your home, but simultaneously provides an endless supply of hot water for use in your home

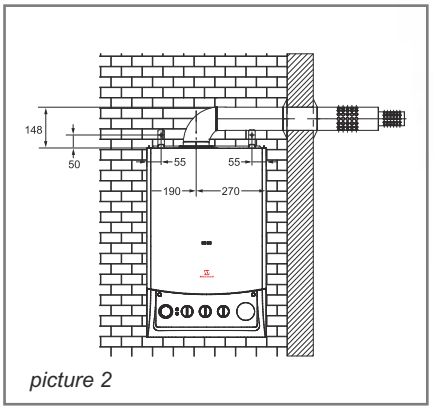
Easy Installation

The Volcan's, sleek design saves space. Unlike conventional, bulky gas boilers that require a large closet or designated area for installation, the Volcan easily installs in a bathroom, closet or kitchen.

- Boiler installation schematics



picture 1

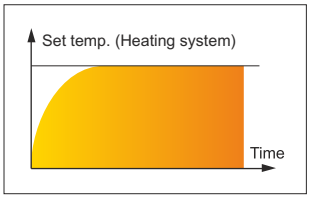
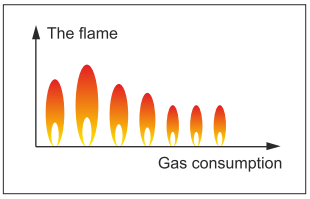
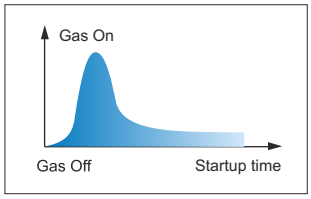
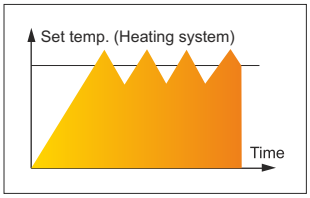
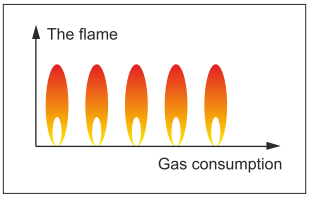
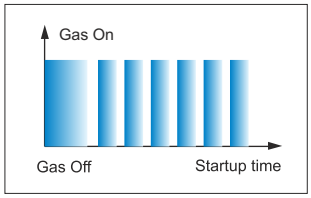


picture 2

State of the art technology

The Volcan features "SCMT"(smart combustion modulator technology).This system cleverly adjusts Combustion power levels depending on the pressure of water, this is significant as there may be times or certain Environments where water pressure may be a factor.

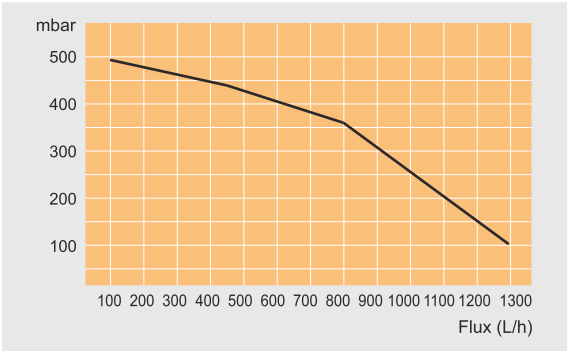
The Volcan V.S. common boilers

	Temperature control	Combustion control	Efficiency
VOLCAN series boiler	According to the set temperature, the boiler keeps the temperature steady. 	The boiler adjusts the flame based on the set temperature 	Once the water temperature reaches, your set temperature, the boiler reduces its gas consumption. Thus making the efficiency reaches 92% 
Common boilers	The temperature difference between returning water and the outlet water is variable. 	The temperature of the water is not steady, the temperature is only controlled by the turning the combustion on and off 	The boiler ignites frequently wasting more gas which makes it less efficient. 

Plastics and stainless steel window of emitting smoke

While other boilers come equipped with low-grade thin chimneys, the Volcan comes standard with a 5mm thick high-grade stainless steel chimney. The optional plastic chimney comes treated in a special ultra violet coating that prevents the chimney from discoloring.

The run curve of the circulation pump

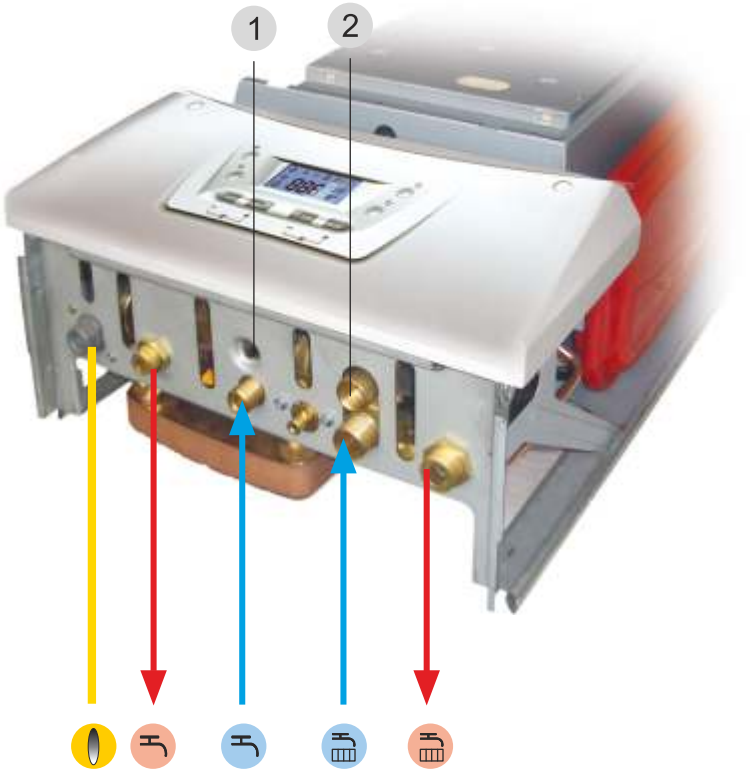


(Considering the pressure lost along the line of the central boiler)

Sleek and elegant in Design

Features

1. Affusion/refilling water valve
2. Security valve
3. Gas inlet
4. Domestic hot water outlet
5. Tap water inlet
6. Hot water inlet
7. Hot water outlet



More advanced technology, more comfort

Intelligent computer control system

Two convenient heating modes
Floor – heating: 77-140 F, radiator and fan coil system: 86- 176 F

Two stage, intelligent defrosting system
When the outside temperature reaches lower than 46 F, the circulating pump of boiler starts. When temperatures decrease to 37 F the boiler will operate for several minutes at the lowest capacity.

Grundfos water pump system
Best in class performance.

Automatic anti-pump lock
If the boiler stops for 21 hours, the pump will automatically turn on for 2 minutes, to avoid the Pump from locking.

Automatic anti-over heat
When the boiler stops, the pump will automatically turn on for 2 minutes to avoid overheating.

Air discharge system
When the boiler stops, the fan will continue to operate to remove the remaining hot air.

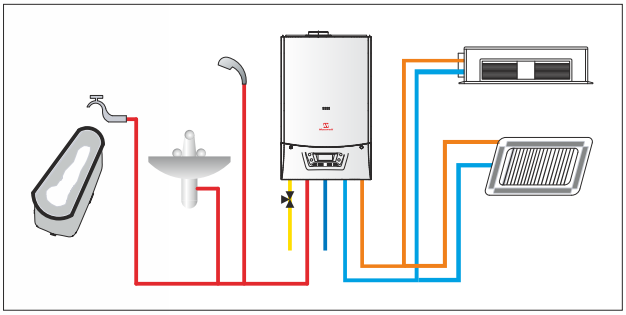
Comfortable bath temperature setting
Quickly supplies warm water for baths.

Easy operation

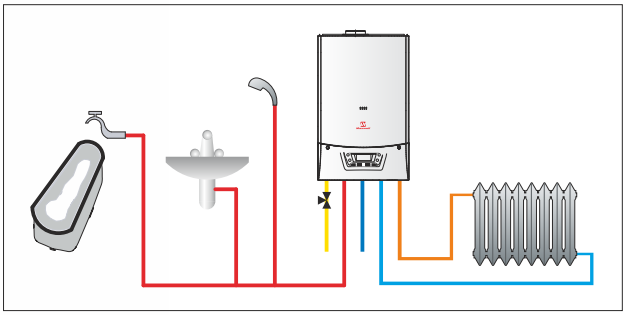
Malfunction code display
Viewable temperature and malfunction code for troubleshooting

Technology & functionality at its best

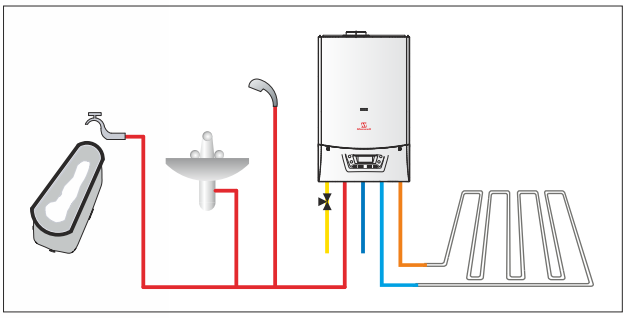
Using the Volcans smart combustion modulator technology “SCMT”, the tankless water heating system provides instant hot water at about 4 gallons per minute providing you the best home heating performance. These units can be connected with a fan coil, ducted air conditioners, air handlers, radiators, and floor heating systems.



Connection with fan coil and ducted air conditioner



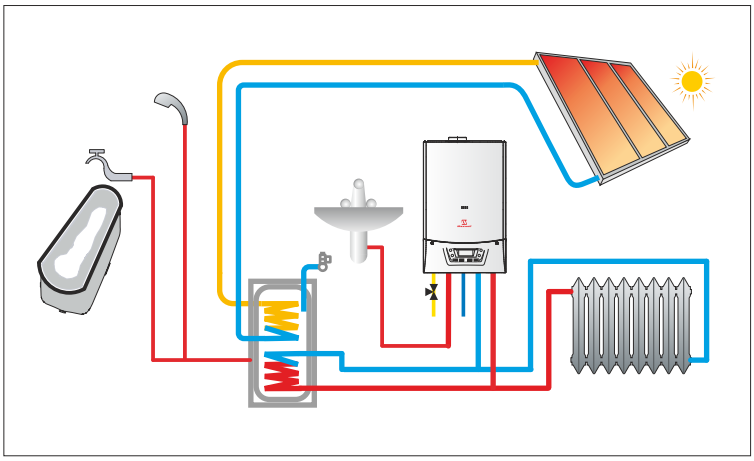
Connection with radiator



Connection with floor heating system

Multi-system adaptation

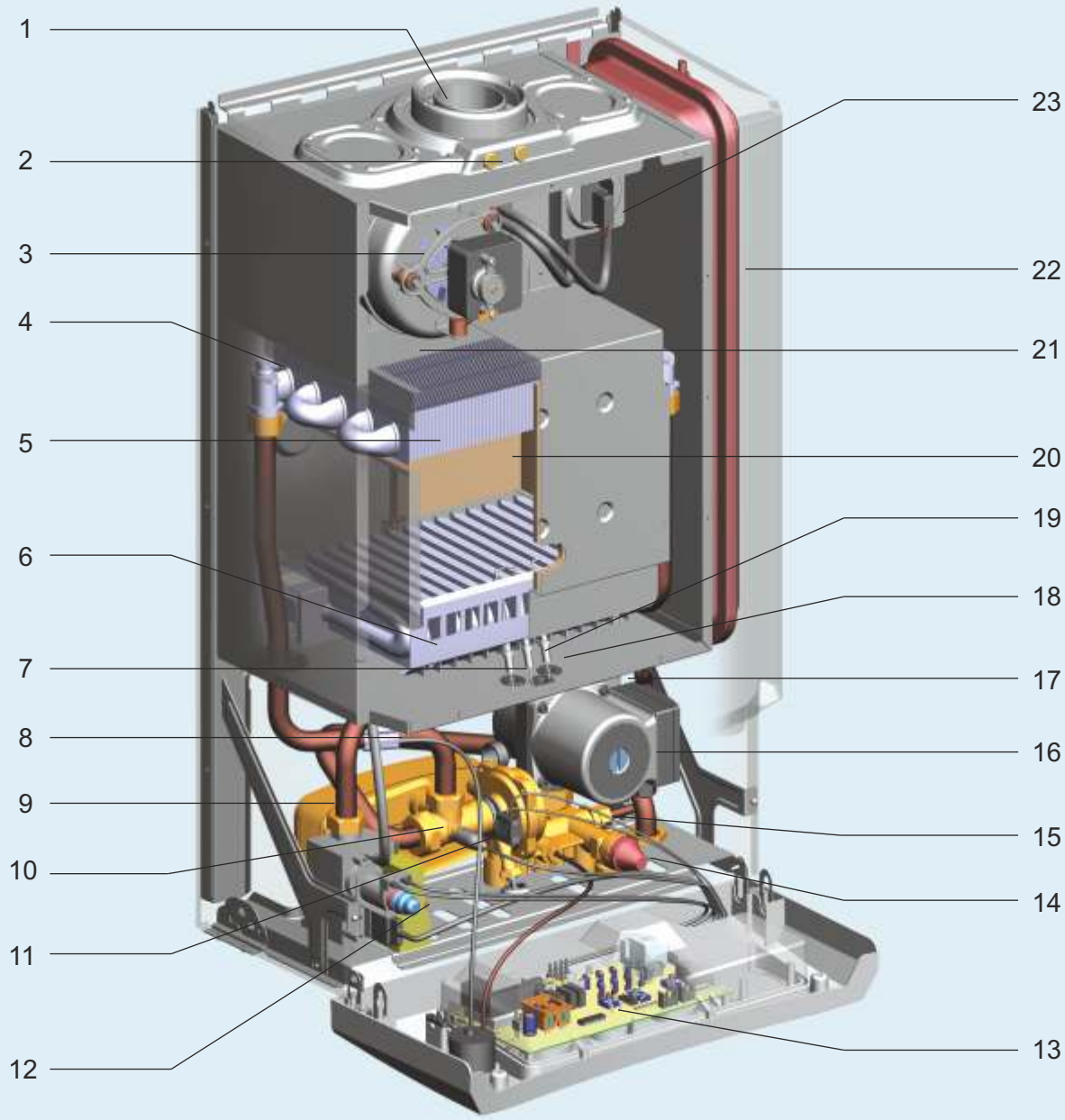
The Volcan supplies high heat in three different operating modes. This multi functional system is designed to connect with the radiator, floor heating radiator system and the central air conditioner, easily and conveniently.



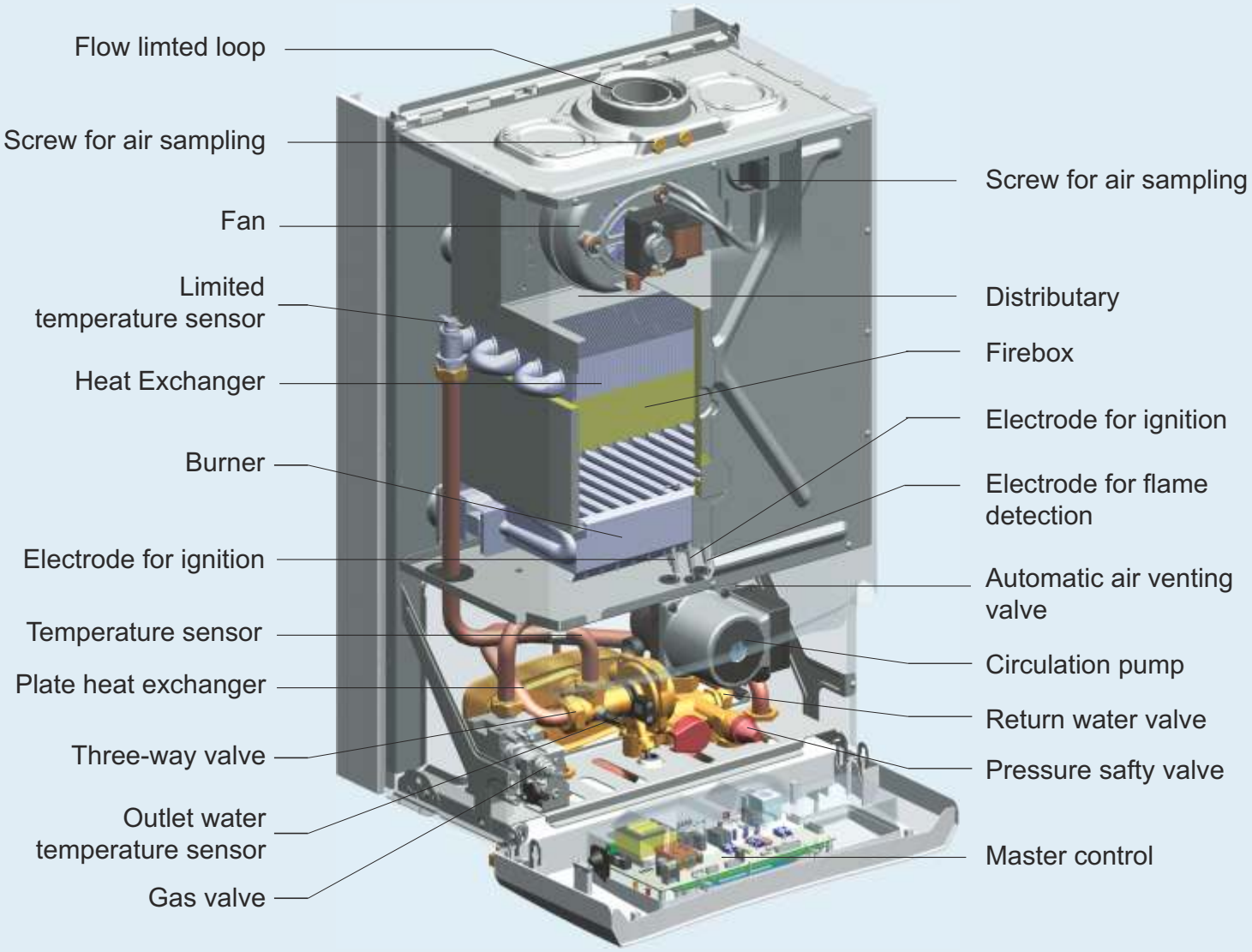
Connection with solar energy collector

Solar Energy Collector

- The solar energy collector can be connected to the VOLCAN series to use.



1 Flow limted loop
2 Screw for air sampling
3 Fan
4 Limited temperature sensor
5 Heat Exchanger
6 Burner
7 Electrode for ignition
8 Temperature sensor
9 Plate heat exchanger
10 Three-way valve
11 Outlet water temperature sensor
12 Gas valve
13 Master control
14 Pressure safty valve
15 Back-water valve
16 Circulation pump
17 Automatic air venting valve
18 Electrode for flame detection
19 Electrode for ignition
20 Firebox
21 Distributary
22 Expasion-tank
23 Air/gas pressure switch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Screw for air sampling
Distributary
Firebox
Electrode for ignition
Electrode for flame detection
Automatic air venting valve
Circulation pump
Return water valve
Pressure safty valve
Master control

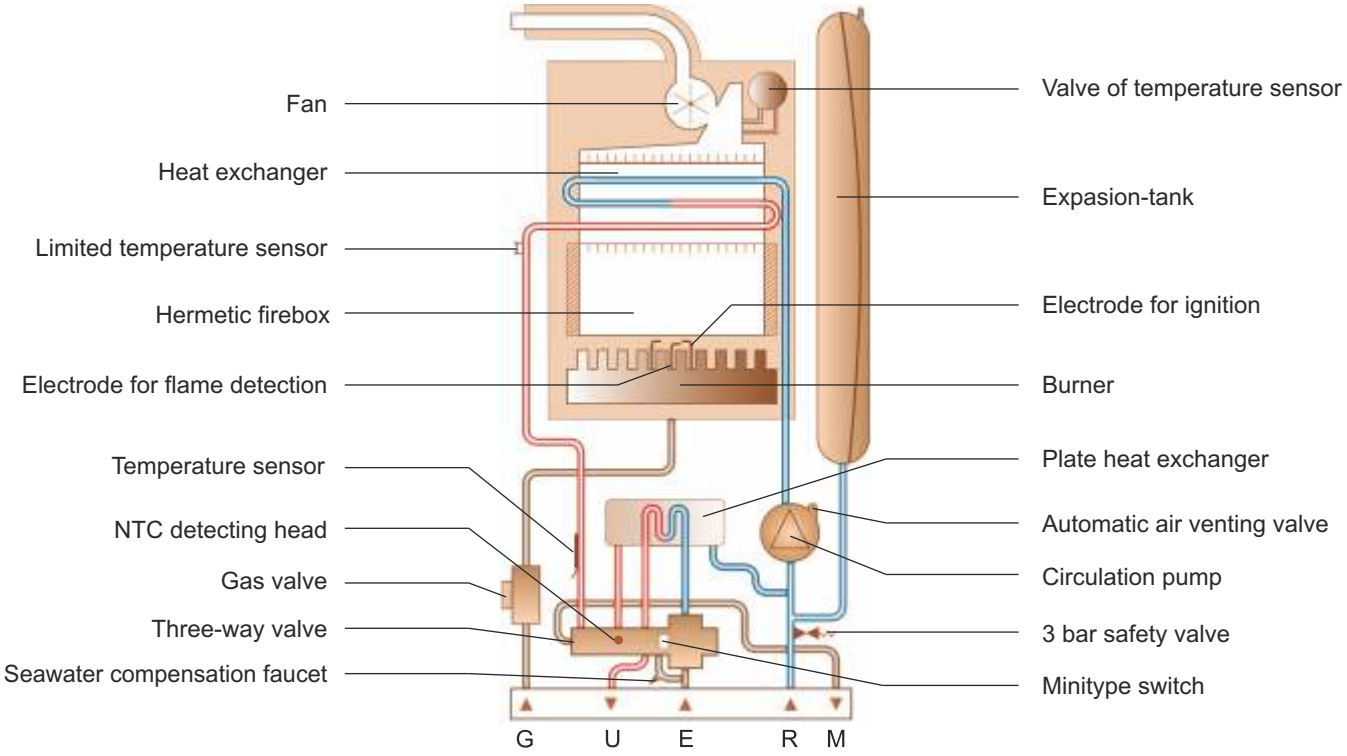
Best components in the industry

GRÄSSLIN CIMM IMIT

GRUNDFOS ZILMET ALFA LAVAL

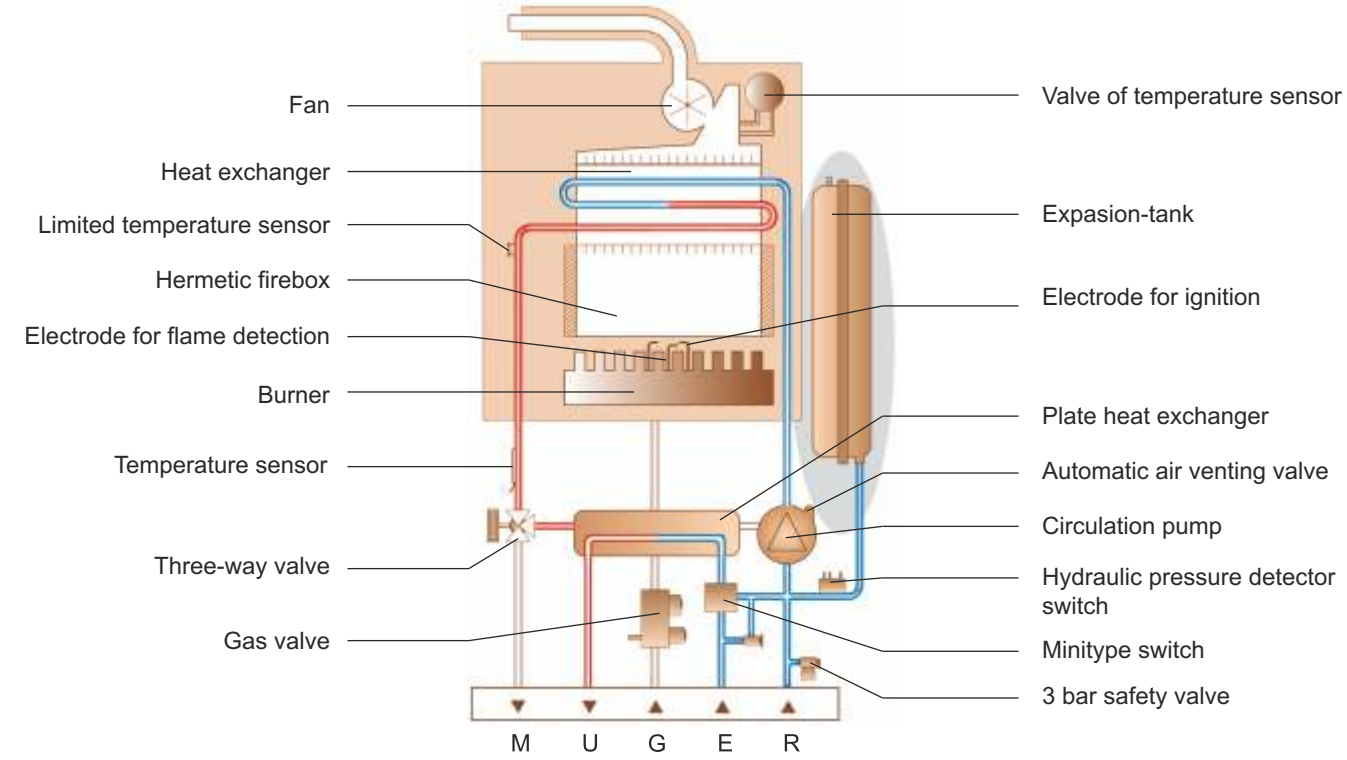
The Volcan uses only the best components in the world. Such as Sweden's Alfa Laval for its stainless steel plate heat exchanger, Italy's IMIT, and SIT who design the finest master controls and proportional gas control valves and Germany's GRUNDFOS who produce world renowned circulating water pumps.

MGBWA070 and MGBWA090 Operational Principle



G: Gas inlet U: Hot water outlet E: Cold water inlet R: Heating water inlet M: Heating water outlet

MGBWA100 Operational Principle



M: Heating water outlet U: Hot water outlet G: Gas inlet E: Cold water inlet R: Heating water inlet

Specs

Heating System

Model	MGBWA070	MGBWA090	MGBWA0100
Gas type		Natural gas, LPG, Artificial coal gas	
Rated input capacity (Btu/h)	70.000	90.000	100.000
Rated output capacity (Btu/h)	63.000	81.000	93.300
Min. input capacity for heating (Btu/h)	36.000	38.000	38.000
Min. output capacity for heating (Btu/h)	32.000	34.200	35.800
Min. input capacity for hot water (Btu/h)	33.000	33.500	33.500
Min. output capacity for hot water (Btu/h)	27.600	27.600	27.600
AFUE (%)	90.1	90.1	93.3
Working pressure of heating system (PSI)	7~43	7~43	7~43
Max. heating water temperature (°F)	194	194	194
Adjustment range of heating water temperature (°F)	86~176	86~176	86~176
Rated electric power (W)	125	125	125
Electrical protection (IP)	X4D	X4D	X4D
Expansion tank vloume (L)	6	6	8
Expansion tank prelead (PSI)	14.5	14.5	14.5
Heating area (ft^2)	500~1650	650~2200	850~2700
Power supply	110V/60Hz	110V/60Hz	110V/60Hz
Referance Natural Gas (12T) consumption (gom)	4~8.5	5,4~11.4	6.3~13.3
Lpg (20Y) (Lb/h)	1.65~3.45	2.2~4.6	2.55~5.4
Net weight (Lb)	80	83	88

Domestic Hot Water System

Model	MGBWA070	MGBWA090	MGBWA0100
Max. working pressure (PSI)	100	100	100
Min. working pressure (PSI)	7.25	7.25	7.25
Hot water capacity with △t=45 F (Lb/min)	23	30	35
Hot water temperature adjustment range (±3°F) (°F)	86~140	86~140	86~140
Min. hot water flow for starting (Lb/min)	5.5	5.5	5.5
Limited flow (Lb/min)	22	22	22

Rated Gas Pressure

Model	MGBWA070	MGBWA090	MGBWA0100
Natural gas (PSI)	0.3	0.3	0.3
LPG (PSI)	0.4	0.4	0.4
Artificial Coal gas (PSI)	0.15	0.15	0.15

Maxwell

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